



**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q80456

GUPTA, Sandeep, *et al.*

Appln. No.: 10/797,936

Group Art Unit: 1624

Filed: March 11, 2004

Examiner: Deepak Rao

For: **SUBSTITUTED BENZENE COMPOUNDS, PROCESS FOR THEIR  
PREPARATION, AND HERBICIDAL AND DEFOLIANT COMPOSITIONS  
CONTAINING THEM**

**DECLARATION UNDER 37 C.F.R. §1.132**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir/Madam:

I, Takahiro HAGA, Ph.D., do declare and state that:

I graduated from Kyoto University, Faculty of science, Department of chemistry in March 1965.

Since April 1965, I have been employed by Ishihara Sangyo Kaisha, Ltd., and have worked in Central Research Institute of said company.

Since July 1974, I have studied at University of Alberta, Faculty of science, Department of chemistry, and received a master's degree.

In January 1977, I returned to Central Research Institute of Ishihara Sangyo Kaisha, Ltd.

In January 1986, I received a doctor's degree in agriculture at Kyoto University.

Since July 1996, I have been temporarily transferred to the United States to establish a research center.

Since April 1997, I have served as the vice-president of Concord Research Center Ltd.

Since 2000, I have doubled as the vice-director of Central Research Institute of Ishihara Sangyo Kaisha, Ltd. as well as the vice-president of Concord Research Center Ltd.

Presently, I have doubled as the managing director and operating officer of Ishihara Sangyo Kaisha, Ltd. as well as the vice-director of Central Research Institute of Ishihara Sangyo Kaisha, Ltd.

The following experimentation was conducted by my direct supervision.

### EXPERIMENTATION

The experimentation was carried out in the same manner as in Test Example (Pre-emerge Test) in the specification of the present application by using the compounds shown in the attached Table 1. As shown in Table 1, Compound No. 1-4 of the present invention shows excellent herbicidal activity at a dose of 31 g/ha for key weeds in the upland field, i.e., *Amaranthus retroflexus* (AMARE), *Sida spinosa* (SIDSP) and *Abutilon theophrasti* (ABUTH), and also shows clear safety for corn. On the other hand, Comparative compound A which is a position isomer of Compound No. 1-4 shows weak activity for AMARE, but has no activity for other weeds. The test results support that the obviousness based on the position isomers is not applied to the present invention. Also, the tendency similar to this herbicidal action between the position isomers was found in the herbicidal action between Comparative compound B and its position isomer.

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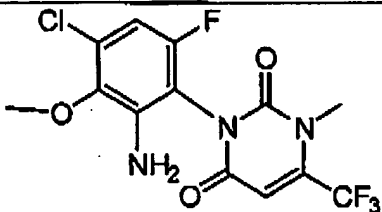
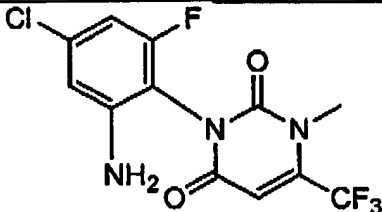
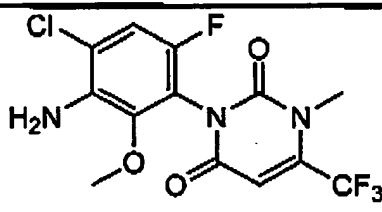
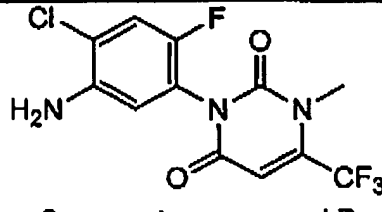
PATENT APPLICATION

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date : \_\_\_\_\_ Name : \_\_\_\_\_

Takahiro HAGA, Ph.D.

Table 1 (Pre-emerge herbicidal activity)

| Structure   | Dose<br>(g ai/ha) | Herbicidal activity |       |       | Phytotoxicity |
|---|-------------------|---------------------|-------|-------|---------------|
|   |                   | AMARE               | SIDSP | ABUTH | CORN          |
| <br>Present Invention<br>Compound No. 1-4<br>Position isomer of Comparative compound A | 31                | 100                 | 100   | 100   | 0             |
| <br>Present Invention<br>Position isomer of Comparative compound B                     | 31                | 100                 | 100   | 80    | 0             |
| <br>Comparative compound A   | 31                | 60                  | 0     | 0     | 0             |
| <br>Comparative compound B   | 31                | 80                  | 80    | 70    | 0             |